International application No. PCT/KR2004/001847

CLASSIFICATION OF SUBJECT MATTER

IPC7 D06F 33/02

According to International Patent Classification (IPC) or to both national classification and IPC

FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC7 D06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean Patents and applications for inventions since 1975. Korean Utility Models and applications for Utility models since 1975.

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search terms used)

DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | US 4,843,671(Mitsubishi Denki Corp.) 4 JULY 1989 See the whole document | 1-15 |
| Y | US 5,092,140(Toshiba Corp.) 3 MARCH 1992 See Fig. 2, Claims 1-7 | 10-13 |
| Y | US 5,570,596(Toshiba Corp.) 5 NOVEMBER 1996 See Fig.3, Fig.11, Claims 1-6 | 14,15 |
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| * | Special categories of cited documents: | "T" | later document published after the international filing date or priority |
| "A" | document defining the general state of the art which is not considered | • | date and not in conflict with the application but cited to understand |
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Date of the actual completion of the international search

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Further documents are listed in the continuation of Box C.

19 OCTOBER 2004 (19.10.2004)

20 OCTOBER 2004 (20.10.2004) Authorized officer

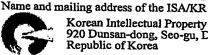
PARK, Jae Hun

Telephone No. 82-42-481-5643

X | See patent family annex.

being obvious to a person skilled in the art

Date of mailing of the international search report



920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR2004/001847

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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| US 5,570,596 | 05-11-1996 | JP 08-010493 JP 08-024477 | 16-01-1996 30-01-1996 |